

QUARTERLY STATUS REPORT


Technology Application Center
The University of New Mexico

FACILITY FORM 602

N 68 - 84889	
(ACCESSION NUMBER)	(THRU)
10	
(PAGES)	(CODE)
CR-79224	
(NASA CR OR TMX OR AD NUMBER)	(CATEGORY)

NASA Contract
NSR-32-004-013

Period July-September 1966



SUMMARY

The operations of TAC during the quarterly period July-September 1966 included an increase in membership from 4 to 14 firms with a total cumulative fee of \$16,550.00. The marketing effort during this period resulted in personal presentations of TAC services to 49 companies; 24 companies responded in the negative and 60 were still giving consideration to the proposal at the end of the quarter. Fifty five Retrospective Searches, 16 Selective Dissemination Service profiles, 258 Industrial Applications Reports, 186 Tech Brief issues and 63 other Special Publications were selected and distributed to members and prospects. In addition 113 Gemini photos were ordered from TAC, plus 208 STAR and 42 IAA reports. TAC's personnel numbers 26 employees, or 15 full time employees.

TAC has two principal programs--the associate member program and the affiliate member program. The former offers complete, comprehensive, tailored, personalized information retrieval based upon the RSS, the SDS and the IAR. The affiliate program is limited in scope, experimental in nature and is designed to aid the small firm with limited capacity to absorb scientific and technological information and data. Special services consist of the Natural Resources program and the COSMIC Computer program. Six of the 14 members are classified as associate member firms. No direct transfers are reported but several examples of useful application of data and information are presented in both major programs.

Other activities included participation by TAC in meetings with STSA representatives, publication of an article describing the Center in the RESEARCH/DEVELOPMENT magazine, and exchange visits with other RDC and NASA Centers.

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I. TAC Operations

A. Membership

1. Total members as of June 30, 1966 - 4
2. New members acquired during first quarter, fiscal 1966-67 - 10

Benischek Manufacturing Company, Albuquerque, New Mexico
Eidal International, Albuquerque
Envirco, Inc., Albuquerque
General Electric Company, Computer Equipment Department
Phoenix, Arizona
Grafix, Inc., Albuquerque
Marathon Oil Company, Denver, Colorado
Sandia Battery and Manufacturing Company, Albuquerque
Sandia Corporation, Albuquerque
Service Circuits, Inc., Albuquerque
Sparton Southwest, Inc., Albuquerque

3. Total members at end of first quarter - 14
4. Total fees for first quarter, fiscal 1966-67 - \$16,550

B. Marketing

1. Total companies given TAC presentation this quarter - 49

Total presentations to date - 110

2. Companies expressing positive attitude toward TAC this quarter - 13

Total companies expressing favorable attitude toward
TAC - 34

3. Companies undecided on value of TAC program - 13
4. Companies giving negative response this quarter - 24

Total negative responses to date - 49

C. Dissemination Activity

1. Regular Services

a. Retrospective Searches performed

Computer - 50

Manual - 5

b. Selective Dissemination Profiles initiated - 16

c. Total current Selective Dissemination Profiles - 29

d. Industrial Applications Reports distributed

Issues - 258

Copies - 1157

e. Tech Briefs distributed

Issues - 186

Copies - 1350

f. SP 5000 series publications distributed - 63

2. Special Services

Gemini photos distributed, first quarter - 113

3. Full reports supplied as a result of regular service:

STAR - 208

IAA - 47

D. Personnel

Total number of TAC employees - 26 (full-time equivalent - 15)

a. Administrative personnel - 4

b. Senior Engineers - 3

c. Applications Engineers - 7

d. Engineering Assistants - 2

e. Other (clerical, etc.) - 10

II. TAC PROGRAMS

A. Associate Member Program

1. Description

The Associate Member Program is the key program offered and promoted by the Technology Application Center. It provides for industry complete and comprehensive access to the NASA information base. It is designed to meet the exacting requirements of those companies who possess diversification in their product scope and staff membership, and who are in a favorable financial position to readily benefit from individually tailored scientific and technological interest profiles.

Under this program the Technology Application Center provides three standard services for member companies on a continuing basis. The types of service and their descriptions are:

- a. Retrospective Search Service (RSS) - The Retrospective Search Service provides a tailored computerized search of aerospace literature for documents applying to a specific and well defined technological problem. The literature searched generally covers a period of approximately five years, including very recent information. The output to member companies is a select number of relevant document abstracts.
- b. Selective Dissemination Service (SDS) - The Selective Dissemination Service provides a semi-monthly computer screening of all new documents pertinent to each member company's scientific and technical interest profile.

Center staff engineers review the computer designated abstracts for relevancy and forward only those new document abstracts which are in direct support of the company interest profile.

- c. Industrial Applications Reports (IAR) - The Industrial Applications Report service consists of a semi-monthly mailing of several announcements of technical innovations which have been identified by TAC personnel as having general and/or specific commercial applications to member firms. The sources of these announcements cover NASA, AEC, DOD and other government documents, as well as civilian professional and technical publications. The announcements are disseminated in two categories:
Industrial Applications Reports and Tech Briefs.

The Center also provides an ordering service for full length documents, either in microfiche or hard copy, for each of the above detailed standard services. In addition, Center staff engineers are available to discuss the documents and assist in interpretation and implementation to the degree required by the member company.

These features, together with a unique knowledge of the contents of the NASA information base, and an intimate knowledge of the members' requirements and plans, are associated with the Center's "value added" concept. The value added to information in the normal transfer process is considered the final measure of its effectiveness.

The fee schedule for associate membership to the Technology Application Center is largely determined by the respective amounts of required service and is based to a very considerable extent on the number of individual technological "interest profiles" and retrospective searches requested. In general, the Center's annual associate membership fees begin at \$1,000 and escalate upwards to \$5,000 according to the firm's expected usage. In those instances where the company specifies a special broad range program the fees will exceed \$5,000 per year.

2. Special Services

Beginning this quarter, the Technology Application Center introduced two new special services to its associate member firms. These special services are offered to all member companies who have the skill, knowledge and equipment to assess and utilize the service outputs. Immediately following is the definition and scope of the special services:

- a. Natural Resources - In addition to the dissemination of documented information on natural resources as part of its standard program outlined above, the Center has obtained, evaluated and cataloged photographs obtained on Gemini Flights IV through X. The Center's engineering staff is now in the process of gathering background data on the various ground truth sites that have been selected for NASA's Earth Resources Survey Program. All evolved data will be passed to the qualified user companies in a timely manner.

Currently, a special study is being conducted by TAC to examine, evaluate and identify NASA programs and information which have specific applicability to the Natural Resources segment of the nation's economy.

- b. COSMIC Program - Immediately following the announcement and formal establishment of the COSMIC program (operated by the University of Georgia to make NASA developed computer programs available to industry), a sample survey was made of this Center's member firms in order to assess their interest in and anticipated use of "already-developed" computer programs. The results of the survey indicated a significant interest and the Center decided to initiate dissemination of the COSMIC announcements to all interested member firms. In certain instances, the Center is also providing a coordinating service, either to obtain additional particulars concerning a specific program prior to ordering the actual deck or tape, or upon request, to order the computer program and its supporting documentation. As an additional resource in support of this program, the operations manager for the University of New Mexico Computer Center has agreed to serve as a consultant to the Center on computer problems.

3. Comments

- a. In the latter two quarters of fiscal year 1966 the Center established its in-house information resources

and actively campaigned for membership inside the state of New Mexico. Beginning this quarter, a vigorous campaign was undertaken to present the Center's programs and develop membership outside of New Mexico. This step was undertaken because of the need to broaden the base of industrial support for the Center in this thinly industrialized region. The effort has thus far resulted in the acquisition of associate member firms in Arizona, Utah, Colorado and Texas, as well as in New Mexico.

- b. From a total Center membership of fourteen (14) firms, six (6) are classified as associate members.
- c. The Center has not obtained any direct transfer for reporting purpose this quarter. However, a number of favorable comments and remarks of satisfaction have been received from member firms. The following are examples:
 - 1) One prospective member has obtained a group of the Gemini photos and they have reported that they were useful in helping solve a geologic problem. A certain number of the Gemini photos have been used by the teaching staff of the Geology Department of the University of New Mexico.
 - 2) Two of the Center engineers made a presentation at the Rocky Mountain Minerals Conference in Denver, September 9, 1966, to explain how NASA technology can be applied in the extractive

industries. This talk was well received and has resulted in several inquiries from interested firms.

- 3) A retrospective search was conducted on the subject of Magnetic Film properties for one of the member firms. The requestor stated that the search output was the most complete he had ever witnessed in this field. The company was in a knowledgeable position in this field and admitted that numerous reports were exposed to the staff for the first time. The firm indicated 100% relevancy.

B. Affiliate Member Program

1. Description

The Affiliate Member Program is an experimental program designed to provide an association with the Center for the especially small firm having a limited range of technological interests and resources. Participants in the program typically have less than 50 employees of which only two or three have a significant degree of technical education. The Center provides the Affiliate Member with three basic (and limited) services:

- a. Problem Solving Information - This service attempts to provide documents that collectively satisfy an information request. Exhaustive computerized searches are not normally conducted and the output from this service does not equal the comprehensiveness of the retrospective search.

- b. Current Awareness Program - This service attempts to make use of previously developed selective dissemination topics including SCAN categories. Each Affiliate receives bi-monthly notification of new documents that are broadly related to the firm's interests. Unique new profiles are not developed to satisfy the individual Affiliates requirements.
- c. Industrial Applications Reports - Affiliates and Associate Members receive the same package of announcements.

2. Comments

- a. The Affiliate Member Program was initiated on July 1, 1966, and major effort was devoted to marketing. By the end of September, eight (8) firms had joined the new program and are currently participating in the experiment. The Center has provided twenty (20) documents in response to the Affiliates' information needs to date. These documents represent a knowledge input to the firms which has not yet resulted in a measurable output in the form of increased productivity, profits, or employment level.
- b. In addition, notable achievements include:
 - 1) A lubrication problem was solved for a machine shop that was developing a unique high-pressure bearing.
 - 2) A battery manufacturer who was plagued with a lead plate brittleness problem was shown how to prevent the trouble.

- 3) A small electroplater who was interested in expanding his operations to printed circuit fabrication was told how to do it and how/where to bid for government contracts.

III. Other

- A. During the period, staff members participated in the conferences sponsored by the Federation of Rocky Mountain States, Inc. These meetings explored possible States Technical Services Act - TAC programs.
- B. The resources and capabilities of the Center were promoted in an article, "The University of New Mexico Technology Application Center", published in the September issue of RESEARCH/DEVELOPMENT and in a paper, "The Transfer of Aerospace Technology to the Natural Resources Industry", presented at the Rocky Mountain Minerals Conference sponsored by the American Institute of Mining Engineers.
- C. The Center was visited by Mr. Donald Carpenter of TUSC, Southeastern State College, for the purposes of studying TAC's Natural Resources Program and exchanging techniques of technology transfer to small business.
- D. A visit was made to the MSC, Houston, by TAC personnel to acquaint the Center more fully with the operations of the TU office and the Earth Resources Survey Program located there.